

SEQUENCE LISTING

<110> Biom asure, Inc.

<120> ANALOGUES OF GLP-1

<130> 00537/186W01

<150> 09/206,601

<151> 1998-12-07

<160> 363

<170> PatentIn Ver. 2.0

<210> 1

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<212> PRT

<213> Homo sapiens

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Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Gly	Arg		
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<220>

<221> MOD_RES

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<220>

<223> this sequence has an amidated c-terminus

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Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Lys	Xaa	Arg		
			20					25					30		

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<222> (1)

<223> N-alpha-(4-(2-hydroxyethyl)-1-piperazine-ethan sulfonic acid)-histidin

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<220>
<223> this sequence has an amidated c-terminus

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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
      20           25           30

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<220>
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 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
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 1 5 10 15
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<220>
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 1 5 10 15
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 1 5 10 15
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 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
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 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

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 1 5 10 15
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 1 5 10 15
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 <223> this sequence has an amidated c-terminus

<400> 39
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 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 40
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 <212> PRT
 <213> Artificial Sequence

<220>
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<210>
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<220>
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<400> 40
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 1 5 10 15
 Gln Ala Lys Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 41
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<220>
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<210>
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<210>
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<210>
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<220>
<223> this s quence has an amidated c-terminus

<400> 41
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Xaa Glu Gly
 1          5          10          15
Gln Xaa Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
      20          25          30

<210> 42
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<220>
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<400> 42
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10          15
Gln Ala Ala Lys Glu Phe Xaa Ala Trp Xaa Val Lys Xaa Arg
      20          25          30

<210> 43
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<212> PRT
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<220>
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<222> (18)
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<220>
<223> this sequence has an amidated c-terminus

<400> 43
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1              5              10              15
Gln Xaa Ala Lys Glu Phe Xaa Ala Trp Xaa Val Lys Xaa Arg
      20              25              30

<210> 44
<211> 30
<212> PRT
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<220>
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<400> 44
His Xaa Glu Gly Thr Xaa Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1              5              10              15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
      20              25              30

<210> 45
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<212> PRT
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<220>
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<220>
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<400> 45
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 1          5          10          15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
          20          25          30

<210> 46
<211> 30
<212> PRT
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<220>
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<400> 46
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10          15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Xaa Lys Xaa Arg
          20          25          30

<210> 47
<211> 30
<212> PRT
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 <220>
 <223> this sequence has an amidated c-terminus

<400> 47
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 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 48
 <211> 30
 <212> PRT
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<220>
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<220>
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<400> 48
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 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 49
 <211> 30

<212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
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<400> 49
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 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 50
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<220>
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<220>
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<220>
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 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 51
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<220>
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<223> 1-amino-1-cyclohexanecarboxylic acid

<220>
<221> MOD_RES
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<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 51
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Glu Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
20 25 30

<210> 52
<211> 30
<212> PRT
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<220>
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<220>
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<223> 1-amino-1-cyclohexanecarboxylic acid

<220>
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<220>
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<400> 52
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1 5 10 15
Glu Xaa Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
20 25 30

<210> 53
<211> 30

<212> PRT
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<220>
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<220>
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<220>
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<400> 53
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Xaa Xaa Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 54
 <211> 30
 <212> PRT
 <213> Artificial Sequence

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<220>
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<400> 54
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 1 5 10 15
 Glu Xaa Xaa Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 55
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 <212> PRT
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<220>
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<220>
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<220>
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<400> 55
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 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 56
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<220>
 <223> this sequence has an amidated c-terminus

<400> 56
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 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 57
 <211> 30
 <212> PRT
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<220>
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 <223> beta-alanine

<220>
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<400> 57
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 58
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<220>
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<220>
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<400> 58
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Xaa Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 59
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<400> 59
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Xaa Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 60
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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<220>
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<222> (29)
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 <220>
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 <400> 60
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 1 5 10 15
 Gln Ala Xaa Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

 <210> 61
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 <212> PRT
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 <220>
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 <220>
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 <220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

 <220>
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 <400> 61
 His Xaa Glu Gly Thr Phe Thr Ser Asp Xaa Ser Ser Tyr Xaa Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

 <210> 62
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 <212> PRT
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<220>
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<400> 62
 His Xaa Glu Gly Thr Phe Thr Ser Asp Xaa Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Xaa Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 63
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<400> 63
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 1 5 10 15
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 20 25 30

<210> 64
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1 5 10 15
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20 25 30

<210> 65
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<223> beta-alanine

<220>
<223> this sequence has an amidated c-terminus

<400> 65
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1 5 10 15
Gln Ala Lys Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
20 25 30

<210> 66
<211> 30
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<220>
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<220>
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<220>
 <223> this sequence has an amidated c-terminus

<400> 66
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 1 5 10 15
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 20 25 30

<210> 67
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<220>
 <223> this sequence has an amidated c-terminus

<400> 67
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Xaa Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 68
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
<221> MOD_RES
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<220>
<223> this sequence has an amidated c-terminus

<400> 68
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Xaa Ala Lys Glu Phe Xaa Ala Trp Xaa Val Lys Xaa Arg
20 25 30

<210> 69
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
<221> MOD_RES
<222> (29)
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<220>
<223> this sequence has an amidated c-terminus

<400> 69
His Xaa Glu Gly Thr Xaa Thr S r Asp Val S r Ser Tyr L u Glu Gly
1 5 10 15

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<400> 71
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1                               10                15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Xaa Lys Xaa Arg
          20                25                30

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<210> 72
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<220>
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<220>
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<220>
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<220>
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 <222> (29)
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<220>
 <223> this sequence has an amidated c-terminus

<400> 72
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Xaa Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 73
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 <212> PRT
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<220>
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 <222> (2)
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<220>
 <223> this sequence has an amidated c-terminus

<400> 73
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 1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
20 25 30

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<210> 74
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<212> PRT
<213> Artificial Sequence
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<220>
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<223> alpha-aminoisobutyric acid

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<220>  
<221> MOD_RES  
<222> (29)  
<223> beta-alanine
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<220>
<223> this sequence has an amidated c-terminus

<400> 74
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Xaa
1 5 10 15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
20 25 30

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<210> 75
<211> 30
<212> PRT
<213> Artificial Sequence
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<220>
<223> Mutagen

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<220>
<221> MOD_RES
<222> (2)-
<223> alpha-aminoisobutyric acid

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<220>  
<221> MOD RES  
<222> (26)  
<223> 1-amino-1-cyclohexanecarboxylic acid
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<220>  
<221> MOD_RES  
<222> (29)  
<223> beta-alanine
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<220>
<223> this sequence has an amidated c-terminus

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<400> 75
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1             5             10             15
Glu Ala Ala Lys Glu Ph Ile Ala Trp Xaa Val Lys Xaa Arg
          20          25          30

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<210> 76
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutag n

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (18)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 76
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Xaa Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 77
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
 <221> MOD_RES
 <222> (18)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (28)
 <223> N-epsilon-octanoyl-lysine

<220>
 <221> MOD_RES

<222> (29)
 <223> b ta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 77
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Xaa Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
 20 25 30

<210> 78
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <222> (18)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (19)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 78
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Xaa Xaa Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 79
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 79
 His Xaa Glu Gly Thr Phe Thr Ser Asp Xaa Ser Ser Tyr Xaa Glu Gly
 1 5 10 15
 Glu Xaa Xaa Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Arg
 20 25 30

<210> 80
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 80
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp L u Val Arg Xaa Arg
 20 25 30

<210> 81
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 81
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 82
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 82
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 83
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this s qu nce has an amidated c-terminus

<400> 83
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 84
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
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<220>
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 <223> beta-alanine

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-tetradecanoyl-lysine

<400> 84
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 85
 <211> 31
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N- psilon-tetradecanoyl-lysin

<400> 85

His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Gly
 20 25 30

<210> 86

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

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<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (30)

<223> N-epsilon-tetradecanoyl-lysine

<220>

<221> MOD_RES

<222> (31)

<223> alpha-aminoisobutyric acid

<400> 86

His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa Xaa
 20 25 30

<210> 87

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

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<220>

<221> MOD_RES

<222> (2)

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<221> MOD_RES

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<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (32)

<223> N-epsilon-tetradecanoyl-lysin

<400> 87

His Xaa Glu Gly Thr Ph Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 88

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (29)

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<220>

<221> MOD_RES

<222> (31)

<223> beta-alanine

<220>

<221> MOD_RES

<222> (32)

<223> N-epsilon-tetradecanoyl-lysine

<400> 88

His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 89

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

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<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (32)

<223> N-epsilon-tetradecanoyl-lysine

<400> 89

His Xaa Glu Gly Thr Phe Thr S r Asp Val Ser Ser Tyr L u Glu Gly
 1 5 10 15

Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 90
 <211> 31
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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 <222> (30)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (31)
 <223> beta-alanine

<400> 90
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Gly Xaa Xaa
 20 25 30

<210> 91
 <211> 31
 <212> PRT
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<220>
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<220>
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<220>
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 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (31)
 <223> alpha-aminoisobutyric acid

<400> 91
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Gly Xaa Xaa
 20 25 30

<210> 92
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 <212> PRT
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<220>
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<222> (2)
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<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (31)
<223> 12-aminododecanoic acid

<400> 92
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa
20 25 30

<210> 93
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (2)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (31)
<223> 12-aminododecanoic acid

<220>
<223> this sequence has an amidated c-terminus

<400> 93
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa
20 25 30

<210> 94
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (2)
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<220>
 <221> MOD_RES
 <222> (31)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (32)
 <223> N-epsilon-tetradecanoyl-lysine

<400> 94
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Gly Arg Xaa Xaa
 20 25 30

<210> 95
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
 <221> MOD_RES
 <222> (31)
 <223> beta-alanine

<220>
 <221> MOD_RES
 <222> (32)
 <223> N-epsilon-tetradecanoyl-lysine

<400> 95
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Gly Arg Xaa Xaa
 20 25 30

<210> 96
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (20)
 <223> N- psilon-octanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 96
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Gly Arg Xaa Xaa
 20 25 30

<210> 97
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 97
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 98
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <221> MOD_RES

<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

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<400> 98
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser S r Tyr L u Glu Gly
  1                      5          10          15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
          20          25          30

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<210> 99
<211> 30
<212> PRT
<213> Artificial Sequence
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<220>
<223> Mutagen

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<220>  
<221> MOD_RES  
<222> (2)  
<223> alpha-aminoisobutyric acid
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<220>  
<221> MOD RES  
<222> (20)  
<223> N-epsilon-octanoyl-lysine
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<220>  
<221> MOD RES  
<222> (29)  
<223> beta-alanine
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<220>
<223> this sequence has an amidated c-terminus

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<400> 99
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1             5             10             15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
          20             25             30

```

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<210> 100
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<212> PRT
<213> Artificial Sequence
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<220>
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<220>
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<222> (2)
<223> alpha-aminoisobutyric acid

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```

<220>
<221> MOD_RES
<222> (20)
<223> N-epsilon-tetradecanoyl-lysine

```

```
<220>
<221> MOD_RES
<222> (29)
<223> b ta-alanine
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<220>
 <223> this sequence has an amidated c-terminus

 <400> 100
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

 <210> 101
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 <220>
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 <220>
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 <222> (20)
 <223> N-epsilon-hexadecanoyl-lysine

 <220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 101
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

 <210> 102
 <211> 30
 <212> PRT
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 <220>
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 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-octanoyl-lysine

 <220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <223> this sequence has an amidated c-terminus

<400> 102
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 103
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 103
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 104
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 104
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15

Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
20 25 30

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<210> 105
<211> 30
<212> PRT
<213> Artificial Sequence
```

<220>
<223> Mutagen

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<220>
<221> MOD_RES
<222> (2)-
<223> alpha-aminoisobutyric acid
```

```

<220>
<221> MOD_RES
<222> (20)
<223> N-epsilon-decanoyl-lysine

```

```

<220>
<221> MOD RES
<222> (29)-
<223> alpha-aminoisobutyric acid

```

<220>
<223> this sequence has an amidated c-terminus

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<400> 105
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1              5              10              15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
          20          25          30

```

```
<210> 106
<211> 30
<212> PRT
<213> Artificial Sequence
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<220>
<223> Mutagen

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<220>
<221> MOD_RES
<222> (2)-
<223> alpha-aminoisobutyric acid

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<220>
<221> MOD_RES
<222> (20)
<223> N-epsilon-octanoyl-lysine

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<220>  
<221> MOD_RES  
<222> (29)  
<223> alpha-aminoisobutyric acid
```

<220>
<223> this sequence has an amidated c-terminus

<400> 106
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Lys Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
20 25 30

<210> 107
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 107
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Lys Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 108
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 108
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Lys Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 109
 <211> 30

<212> PRT
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<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-octanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 109
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 110
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<220>
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<220>
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 <222> (2)
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<220>
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 <222> (20)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 110
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 111
 <211> 30
 <212> PRT
 <213> Artificial Sequence

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<220>
<223> Mutagen

<220>
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<222> (2)
<223> alpha-aminoisobutyric acid

<220>
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<222> (20)
<223> N-epsilon-hexadecanoyl-lysine

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 111
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
          20           25           30

<210> 112
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (2)
<223> alpha-aminoisobutyric acid

<220>
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<222> (20)
<223> N-epsilon-decanoyl-lysine

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 112
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
          20           25           30

<210> 113
<211> 30
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<220>
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<220>
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<220>
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 <222> (20)
 <223> N-epsilon-octanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 113
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 114
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 114
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 115
 <211> 30
 <212> PRT
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<220>
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<222> (2)
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<220>
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 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 115
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 116
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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 <222> (20)
 <223> N-epsilon-decanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 116
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 117
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> N-epsilon-octanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 117
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 118
 <211> 30
 <212> PRT
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<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 118
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 119
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> alpha-aminoisobutyric acid

<220>
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<222> (28)

<223> N-epsilon-hexadecanoyl-lysine

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 119

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Ala	Lys	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 120

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (28)

<223> N-epsilon-octanoyl-lysine

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 120

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 121

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (28)

<223> N-epsilon-hexadecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 121
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 122
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (28)
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<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 122
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 123
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (28)
 <223> N-epsilon-octanoyl-lysine

<220>
 <221> MOD_RES

<222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 123
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 124
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (28)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 124
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 125
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 <213> Artificial Sequence

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<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

 <400> 125
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

 <210> 126
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <220>
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 <223> N-epsilon-decanoyl-lysine

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 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 126
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

 <210> 127
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <223> alpha-aminoisobutyric acid

 <220>
 <223> this sequence has an amidated c-terminus

<400> 129
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr L u Glu Gly
1 5 10 15

Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 130
 <211> 30
 <212> PRT
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<220>
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 <223> N-epsilon-octanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 130
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

<210> 131
 <211> 30
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 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 131
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Ph Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

<210> 132
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (30)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 132
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

<210> 133
 <211> 30
 <212> PRT
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<220>
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<220>
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 <222> (30)
 <223> N-epsilon-octanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 133
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

<210> 134
 <211> 30

<212> PRT
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<220>
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 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 134
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

<210> 135
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<220>
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<220>
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 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 135
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

<210> 136
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<220>
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<220>
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<222> (30)
<223> N-epsilon-octanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 136
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
20 25 30

<210> 137
<211> 30
<212> PRT
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<222> (30)
<223> N-epsilon-hexadecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 137
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
20 25 30

<210> 138
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> alpha-aminoisobutyric acid

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<222> (32)
<223> N-epsilon-octanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 138
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
      20             25             30

<210> 139
<211> 32
<212> PRT
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<220>
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<221> MOD_RES
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<223> N-epsilon-decanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 139
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
      20             25             30

<210> 140
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<220>
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<220>
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<222> (2)
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<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (32)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 140
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 141
 <211> 32
 <212> PRT
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<220>
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<220>
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 <222> (32)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 141
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 142
 <211> 32
 <212> PRT
 <213> Artificial Sequence

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 <220>
 <221> MOD_RES
 <222> (32)
 <223> N-epsilon-octanoyl-lysine

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 142
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

 <210> 143
 <211> 32
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <222> (31)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (32)
 <223> N-epsilon-decanoyl-lysine

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 143
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

 <210> 144
 <211> 32
 <212> PRT
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<220>
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<220>
<221> MOD_RES
<222> (32)
<223> N-epsilon-tetradecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 144
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
20 25 30

<210> 145
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<220>
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<220>
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<222> (32)
<223> N-epsilon-hexadecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 145
His Xaa Glu Gly Thr Ph Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 146
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<220>
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 <222> (32)
 <223> N-epsilon-octanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 146
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 147
 <211> 32
 <212> PRT
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<220>
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<220>
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<220>
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<400> 147
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 148
 <211> 32
 <212> PRT
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<220>
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 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 148
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 149
 <211> 32
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<400> 149
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 150
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<400> 150
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 151
 <211> 32
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<400> 151
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10          15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
          20          25          30

<210> 152
<211> 32
<212> PRT
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<220>
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<400> 152
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10          15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
          20          25          30

<210> 153
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<212> PRT
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<220>
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1 5 10 15
Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
20 25 30

<210> 154
<211> 30
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<220>
<223> this sequence has an amidated c-terminus

<400> 154
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
20 25 30

<210> 155
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<223> N-epsilon-hexadecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 155
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1             5             10             15
Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
      20             25             30

<210> 156
<211> 30
<212> PRT
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<222> (30)
<223> N-epsilon-octanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 156
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
  1             5             10             15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
      20             25             30

<210> 157
<211> 30
<212> PRT
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 <222> (30)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 157
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 158
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 <223> N-epsilon-hexadecanoyl-lysine

<220>
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 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
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 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

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<220>
 <223> this sequence has an amidated c-terminus

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 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

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 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
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 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
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<220>
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 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
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 Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
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<220>
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<220>
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 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
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<220>
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 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 167
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 <212> PRT
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<220>
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<400> 167
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
      20             25             30

<210> 168
<211> 30
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<400> 168
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
      20             25             30

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 20 25 30

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 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

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<220>
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 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

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<220>
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<220>
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 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

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<220>
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<400> 173
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 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

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<220>
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<400> 174
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 1 5 10 15
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

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 1 5 10 15
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 20 25 30

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 <220>
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 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

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 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

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 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

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 1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

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<220>
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<400> 180
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 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

<210> 181
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<220>
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<400> 181
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 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

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 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 182
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
 20 25 30

<210> 183
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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 <223> beta-alanine

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-octanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 183
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 184
 <211> 30

<212> PRT
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<220>
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<220>
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<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 184
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 185
 <211> 30
 <212> PRT
 <213> Artificial Sequence

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<220>
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 <222> (30)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 185
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 186
 <211> 30
 <212> PRT
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<220>
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<220>
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<223> beta-alanine

<220>
<221> MOD_RES
<222> (30)
<223> N-epsilon-decanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 186
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
20 25 30

<210> 187
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
<221> MOD_RES
<222> (30)
<223> N-epsilon-octanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 187
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
20 25 30

<210> 188
<211> 30
<212> PRT
<213> Artificial S quence

<220>
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<220>
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<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 188
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 189
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 189
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Lys Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 190
 <211> 30
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<220>
<221> MOD_RES
<222> (30)
<223> N-epsilon-octanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 190
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
          20           25           30

<210> 191
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<223> beta-alanine

<220>
<221> MOD_RES
<222> (30)
<223> N-epsilon-tetradecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 191
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
          20           25           30

<210> 192
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<223> alpha-aminoisobutyric acid

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<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
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 <222> (30)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 192
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 193
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (29)
 <223> beta-alanine

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-decanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 193
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 194
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<222> (20)
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<220>
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<223> 1-amino-1-cyclohexanecarboxylic acid

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 194
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Xaa Val Arg Xaa Arg
      20           25           30

<210> 195
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (20)
<223> N-epsilon-tetradecanoyl-lysine

<220>
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<222> (26)
<223> 1-amino-1-cyclohexanecarboxylic acid

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 195
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Xaa Val Arg Xaa Arg
      20           25           30

<210> 196
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> alpha-aminoisobutyric acid

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<223> N-epsilon-hexadecanoyl-lysine

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<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 196
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Xaa Val Arg Xaa Arg
          20           25           30

<210> 197
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<223> N-epsilon-octanoyl-lysine

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<221> MOD_RES
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<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 197
His Xaa Glu Gly Thr Ph Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
          20           25           30

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<210> 198
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<220>
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 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
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 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 198
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
 20 25 30

<210> 199
 <211> 30
 <212> PRT
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<220>
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 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
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 <223> N-epsilon-hexadecanoyl-lysine

<220>
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<220>
 <223> this sequence has an amidated c-terminus

<400> 199

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
      20           25           30

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<210> 200

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

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<222> (2)

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<220>

<221> MOD_RES

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<220>

<221> MOD_RES

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<223> N-epsilon-octanoyl-lysine

<220>

<221> MOD_RES

<222> (29)

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<220>

<223> this sequence has an amidated c-terminus

<400> 200

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His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
      20           25           30

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<210> 201

<211> 30

<212> PRT

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<220>

<223> Mutagen

<220>

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<222> (2)

<223> alpha-aminoisobutyric acid

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<221> MOD_RES

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<223> 1-amino-1-cyclohexanecarboxylic acid

<220>

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<222> (28)

<223> N-epsilon-tetrad canoyl-lysine

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<220>
 <223> this sequence has an amidated c-terminus

<400> 201
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
 20 25 30

<210> 202
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-octanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 202
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa
 20 25 30

<210> 203
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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<220>
<221> MOD_RES
<222> (30)
<223> N-epsilon-tetradecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 203
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa
      20           25           30

<210> 204
<211> 30
<212> PRT
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<220>
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<220>
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<220>
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<220>
<221> MOD_RES
<222> (30)
<223> N-epsilon-hexadecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 204
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa
      20           25           30

<210> 205
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<212> PRT
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<220>
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<220>
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<220>
 <223> this sequence has an amidated c-terminus

<400> 205
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa
 20 25 30

<210> 206
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<220>
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 <222> (30)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 206
 His Xaa Glu Gly Thr Ph Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Ph Il Ala Trp Xaa Val Lys Xaa Xaa
 20 25 30

<210> 207
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<220>
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<220>
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 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 207
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa
 20 25 30

<210> 208
 <211> 30
 <212> PRT
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 <223> L-amino-1-cyclohexanecarboxylic acid

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<220>
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 <222> (30)
 <223> N-epsilon-octanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 208
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa
 20 25 30

<210> 209
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<220>
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 <223> N-epsilon-decanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 209
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa
 20 25 30

<210> 210
 <211> 30
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<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

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<220>
<221> MOD_RES
<222> (30)
<223> N-epsilon-tetradecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 210
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa
      20           25           30

<210> 211
<211> 30
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<220>
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<220>
<221> MOD_RES
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<223> N-epsilon-hexadecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 211
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa
      20           25           30

<210> 212
<211> 30
<212> PRT
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<222> (18)
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<220>
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<220>
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<220>
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<400> 212
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Xaa Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
      20           25           30

<210> 213
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<220>
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<220>
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<223> this sequence has an amidated c-terminus

<400> 213
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Xaa Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
      20           25           30

<210> 214
<211> 30
<212> PRT
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<220>
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<220>
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<220>
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 <222> (20)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 214
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Xaa Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

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<220>
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<220>
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<400> 215
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 1 5 10 15
 Gln Xaa Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

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 1 5 10 15
 Gln Xaa Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
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<220>
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<400> 217
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 1 5 10 15
 Gln Xaa Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
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<220>
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 1 5 10 15
 Gln Xaa Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
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<220>
<223> this sequence has an amidated c-terminus

<400> 219
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 1           5           10           15
Gln Xaa Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
      20           25           30

<210> 220
<211> 30
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<220>
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<400> 220
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 1           5           10           15
Gln Xaa Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
      20           25           30

<210> 221
<211> 30
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<213> Artificial Sequence

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<220>
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 1 5 10 15
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 20 25 30

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<220>
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<400> 222
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 1 5 10 15
 Glu Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

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 <223> N-epsilon-tetradecanoyl-lysine

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<220>
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<400> 223
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 224
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<220>
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<400> 224
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 1 5 10 15
 Glu Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
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<210> 225
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<220>
 <223> this sequence has an amidated c-terminus

<400> 225
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 1 5 10 15
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
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<210> 226
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<220>
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<220>
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<400> 226
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 1 5 10 15
 Glu Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Xaa Xaa Arg
 20 25 30

<210> 227
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<220>
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<400> 227
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 1 5 10 15
 Glu Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 228
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<220>
 <223> this sequence has an amidated c-terminus

<400> 228
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 229
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<400> 229
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 1             5             10             15
Glu Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
                20                25                30

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<212> PRT
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<400> 230
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
                20                25                30

<210> 231
<211> 30
<212> PRT
<213> Artificial Sequence

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<400> 231
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
          20           25           30

<210> 232
<211> 30
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<400> 232
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 1           5           10           15
Glu Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Xaa
          20           25           30

<210> 233
<211> 30
<212> PRT
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<220>
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<400> 233
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 1 5 10 15
 Glu Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 234
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 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 234
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 1 5 10 15
 Glu Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 235
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 <212> PRT
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<220>
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<222> (30)
<223> N-epsilon-hexadecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 235
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Glu Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
      20             25             30

<210> 236
<211> 30
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<220>
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<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 236
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Xaa Glu Phe Ile Xaa Trp Leu Val Arg Xaa Arg
      20             25             30

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<212> PRT
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<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 237
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Xaa Glu Phe Ile Xaa Trp Leu Val Arg Xaa Arg
                20             25             30

<210> 238
<211> 30
<212> PRT
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<220>
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<220>
<223> this sequence has an amidated c-terminus

<400> 238
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Xaa Glu Phe Ile Xaa Trp Leu Val Arg Xaa Arg
                20             25             30

<210> 239
<211> 30
<212> PRT
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<220>
 <223> this sequence has an amidated c-terminus

<400> 239
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Xaa Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 240
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<220>
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<220>
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 <222> (29)
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<220>
 <223> this sequence has an amidated c-terminus

<400> 240
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Il Xaa Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 241
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<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 241
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Xaa Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 242
 <211> 30
 <212> PRT
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<220>
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 <222> (30)
 <223> N-epsilon-octanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 242
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Ph Ile Xaa Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 243
 <211> 30
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<220>
 <223> this sequence has an amidated c-terminus

<400> 243
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Xaa Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 244
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 <212> PRT
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<220>
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<220>
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<223> N-epsilon-hexadecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 244
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Xaa Trp Leu Val Arg Xaa Xaa
      20             25             30

<210> 245
<211> 30
<212> PRT
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<220>
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<220>
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<220>
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<400> 245
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Glu Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa
      20             25             30

<210> 246
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<212> PRT
<213> Artificial Sequence

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<222> (30)
<223> N-epsilon-tetradecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 246
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Glu Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa
          20           25           30

<210> 247
<211> 30
<212> PRT
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<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (30)
<223> N-epsilon-hexadecanoyl-lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 247
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Glu Ala Ala Lys Glu Phe Ile Ala Trp Xaa Val Lys Xaa Xaa
          20           25           30

<210> 248
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

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<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-octanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 248
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa
 20 25 30

<210> 249
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-tetradecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 249
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Ala Ala Arg Glu Ph Ile Ala Trp Xaa Val Arg Xaa Xaa
 20 25 30

<210> 250
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 250
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Ala Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa
 20 25 30

<210> 251
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (18)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES

<222> (30)

<223> N-epsilon-octanoyl-lysine

<220>

<223> this sequence has an amidated c-terminus

<400> 251

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Xaa	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Arg	Xaa	Xaa		
			20					25					30		

<210> 252

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (18)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (26)

<223> 1-amino-1-cyclohexanecarboxylic acid

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (30)

<223> N-epsilon-tetradecanoyl-lysine

<220>

<223> this sequence has an amidated c-terminus

<400> 252

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Xaa	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Xaa	Val	Arg	Xaa	Xaa		
			20					25					30		

<210> 253

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (18)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 253
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Xaa Ala Arg Glu Phe Ile Ala Trp Xaa Val Arg Xaa Xaa
 20 25 30

<210> 254
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (18)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (24)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-octanoyl-lysine

<220>

<223> this sequence has an amidated c-terminus

<400> 254

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Xaa	Ala	Arg	Glu	Phe	Ile	Xaa	Trp	Xaa	Val	Arg	Xaa	Xaa		
		20					25						30		

<210> 255

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (18)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (24)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (26)

<223> 1-amino-1-cyclohexanecarboxylic acid

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (30)

<223> N-epsilon-tetradecanoyl-lysine

<220>

<223> this sequence has an amidated c-terminus

<400> 255

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Glu	Xaa	Ala	Arg	Glu	Phe	Ile	Xaa	Trp	Xaa	Val	Arg	Xaa	Xaa		
		20					25						30		

<210> 256

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (18)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (24)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (26)
 <223> 1-amino-1-cyclohexanecarboxylic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-hexadecanoyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 256
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Glu Xaa Ala Arg Glu Phe Ile Xaa Trp Xaa Val Arg Xaa Xaa
 20 25 30

<210> 257
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (1)
 <223> N-alpha-(4-(2-hydroxyethyl)-1-piperazine-ethanesulfonyl)-histidine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 257
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Ph Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 258
 <211> 30

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<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (1)
<223> N-alpha-(4-(2-hydroxyethyl)-1-piperazine-ethanesulfonyl)-
histidine

<220>
<221> MOD_RES
<222> (29)
<223> beta-alanine

<220>
<223> this sequence has an amidated c-terminus

<400> 258
Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
          20           25           30

<210> 259
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (1)
<223> N-alpha-(4-(2-hydroxyethyl)-1-piperazine-ethanesulfonyl)-
histidine

<220>
<221> MOD_RES
<222> (2)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (29)
<223> beta-alanine

<220>
<223> this sequence has an amidated c-terminus

<400> 259
Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
          20           25           30

<210> 260
<211> 30
<212> PRT
<213> Artificial Sequenc

<220>
<223> Mutagen

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<220>
<221> MOD_RES
<222> (1)
<223> N-alpha-(4-(2-hydroxyethyl)-1-piperazin acetyl)-
        histidine

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 260
Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10          15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
      20          25          30

<210> 261
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (1)
<223> N-alpha-(4-(2-hydroxyethyl)-1-piperazineacetyl)-
        histidine

<220>
<221> MOD_RES
<222> (29)
<223> beta-alanine

<220>
<223> this sequence has an amidated c-terminus

<400> 261
Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10          15
Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
      20          25          30

<210> 262
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (1)
<223> N-alpha-(4-(2-hydroxyethyl)-1-piperazineacetyl)-
        histidine

<220>
<221> MOD_RES
<222> (2)
<223> alpha-aminoisobutyric acid

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<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 262
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 263
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (1)
 <223> N-alpha-tetradecanoyl-histidine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 263
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 264
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (1)
 <223> N-alpha-tetradecanoyl-histidine

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 264
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Ph Ile Ala Trp L u Val Lys Xaa Arg
 20 25 30

<210> 265
 <211> 30
 <212> PRT
 <213> Artificial Sequenc

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (1)
 <223> N-alpha-tetradecanoyl-histidine

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 265
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 266
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (1)
 <223> N-alpha-tetradecanoyl-histidine

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 266
 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
 20 25 30

<210> 267
 <211> 30

<212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (1)
 <223> N-alpha-tetradecanoyl-histidine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 267
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 268
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (1)
 <223> N-alpha-tetradecanoyl-histidine

<220>
 <221> MOD_RES
 <222> (29)
 <223> beta-alanine

<220>
 <223> this sequence has an amidated c-terminus

<400> 268
 Xaa Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 269
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (1)
 <223> N-alpha-tetradecanoyl-histidine

<220>
 <221> MOD_RES

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<222> (2)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 269
Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
          20           25           30

<210> 270
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (1)
<223> N-alpha-tetradecanoyl-histidine

<220>
<221> MOD_RES
<222> (2)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (29)
<223> beta-alanine

<220>
<223> this sequence has an amidated c-terminus

<400> 270
Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
          20           25           30

<210> 271
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (1)
<223> N-alpha-tetradecanoyl-histidine

<220>
<221> MOD_RES
<222> (29)
<223> b ta-alanin

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<220>

<223> this s quence has an amidated c-terminus

<400> 271

Xaa	Ala	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25						30		

<210> 272

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (1)

<223> N-alpha-tetradecanoyl-histidine

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 272

Xaa	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
		20					25						30		

<210> 273

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (1)

<223> N-alpha-tetradecanoyl-histidine

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (29)

<223> beta-alanine

<220>

<223> this s quenc has an amidat d c-terminus

<400> 273

Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 274

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (20)

<223> N-epsilon-octanesulfonyl-lysine

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 274

His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 275

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (20)

<223> N-epsilon-dodecanesulfonyl-lysine

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 275

His Xaa Glu Gly Thr Phe Thr Ser Asp Val S r Ser Tyr Leu Glu Gly
 1 5 10 15

<210> 278
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (28)
 <223> N-epsilon-dodecanesulfonyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 278
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 279
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (28)
 <223> N-epsilon-hexadecanesulfonyl-lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 279
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 280
 <211> 30

<212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-octanesulfonyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 280
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 281
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-hexadecanesulfonyl-lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 281
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 282
 <211> 30
 <212> PRT
 <213> Artificial Sequenc

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (2)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (20)
<223> (1-(4-decylpiperazine))aspartic acid

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 282
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
20 25 30

<210> 283
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (2)
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<220>
<221> MOD_RES
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<223> (1-(4-dodecylpiperazine))aspartic acid

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 283
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
20 25 30

<210> 284
<211> 30
<212> PRT
<213> Artificial S quence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (20)
 <223> (1-(4-tetradecylpiperazine))aspartic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 284
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 285
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> (1-(4-hexadecylpiperazine))aspartic acid

<220>
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<220>
 <223> this sequence has an amidated c-terminus

<400> 285
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 286
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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 <220>
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 <223> (1-(4-decylpiperazine))aspartic acid

 <220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 286
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

 <210> 287
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <223> (1-(4-dodecylpiperazine))aspartic acid

 <220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 287
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

 <210> 288
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
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<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 288
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 289
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> (1-(4-hexadecylpiperazine))aspartic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 289
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 290
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<222> (29)
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<220>
<221> MOD_RES
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<223> (1-(4-decylpiperazine))aspartic acid

<220>
<223> this sequence has an amidated c-terminus

<400> 290
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10          15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
      20          25          30

<210> 291
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
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<223> alpha-aminoisobutyric acid

<220>
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<222> (30)
<223> (1-(4-dodecylpiperazine))aspartic acid

<220>
<223> this sequence has an amidated c-terminus

<400> 291
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1          5          10          15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
      20          25          30

<210> 292
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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 <222> (30)
 <223> (1-(4-hexadecylpiperazine))aspartic acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 292
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 293
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (32)
 <223> (1-(4-decylpiperazine))aspartic acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 293
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 294
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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<222> (32)
 <223> (1-(4-dodecylpiperazine))aspartic acid

<220>
 <223> this s quence has an amidated c-terminus

<400> 294
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 295
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <222> (32)
 <223> (1-(4-tetradecylpiperazine))aspartic acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 295
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 296
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (32)
 <223> (1-(4-hexadecylpiperazine))aspartic acid

<220>

<223> this sequence has an amidated c-terminus

<400> 296

His	Xaa	Glu	Gly	Thr	Ph	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Gly	Xaa
			20					25					30		

<210> 297

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

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<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (31)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (32)

<223> (1-(4-decylpiperazine))aspartic acid

<220>

<223> this sequence has an amidated c-terminus

<400> 297

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
			20					25					30		

<210> 298

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

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<220>

<221> MOD_RES

<222> (29)

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<220>

<221> MOD_RES

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<222> (31)
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<220>
<221> MOD_RES
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<223> (1-(4-dodecylpiperazine))aspartic acid

<220>
<223> this sequence has an amidated c-terminus

<400> 298
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
      20             25             30

<210> 299
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (32)
<223> (1-(4-tetradecylpiperazine))aspartic acid

<220>
<223> this sequence has an amidated c-terminus

<400> 299
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
      20             25             30

<210> 300
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (2)
<223> alpha-aminoisobutyric acid

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<220>
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<223> alpha-aminoisobutyric acid

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<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
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<223> (1-(4-hexadecylpiperazine))aspartic acid

<220>
<223> this sequence has an amidated c-terminus

<400> 300
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
      20             25             30

<210> 301
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
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<223> (1-(4-decylpiperazine))aspartic acid

<220>
<221> MOD_RES
<222> (29)
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<220>
<223> this sequence has an amidated c-terminus

<400> 301
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
      20             25             30

<210> 302
<211> 30
<212> PRT
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<220>
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<220>
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<220>
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<220>
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<220>
<223> this sequence has an amidated c-terminus

<400> 302
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
          20             25             30

<210> 303
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
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<222> (20)
<223> (1-(4-tetradecylpiperazine))aspartic acid

<220>
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<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 303
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
          20             25             30

<210> 304
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (2)
<223> alpha-aminoisobutyric acid

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<220>
 <221> MOD_RES
 <222> (20)
 <223> (1-(4-hexadecylpiperazine))aspartic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 304
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 305
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <223> (1-(4-decylpiperazine))aspartic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 305
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 306
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<222> (28)
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<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 306
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
          20           25           30

<210> 307
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<220>
<221> MOD_RES
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<223> (1-(4-tetradecylpiperazine))aspartic acid

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 307
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
          20           25           30

<210> 308
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> (1-(4-h xadecylpiperazine))aspartic acid

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<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 308
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 309
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
 <221> MOD_RES
 <222> (30)
 <223> (1-(4-decylpiperazine))aspartic acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 309
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 310
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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 <222> (2)
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<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
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<222> (30)
 <223> (1-(4-dodecylpiperazine))aspartic acid

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 310
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

 <210> 311
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Mutagen

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 <222> (2)
 <223> alpha-aminoisobutyric acid

 <220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (30)
 <223> (1-(4-tetradecylpiperazine))aspartic acid

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 311
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

 <210> 312
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

 <220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (30)
 <223> (1-(4-hexadecylpiperazine))aspartic acid

<220>
 <223> this sequence has an amidated c-terminus

 <400> 312
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val S r Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

 <210> 313
 <211> 32
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

 <220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (32)
 <223> (1-(4-decylpiperazine))aspartic acid

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 313
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

 <210> 314
 <211> 32
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Mutagen

 <220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (32)
 <223> (1-(4-dodecylpiperazine))aspartic acid

 <220>
 <223> this s quence has an amidat d c-terminus

<400> 314
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser S r Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 315
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (32)
 <223> (1-(4-tetradecylpiperazine))aspartic acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 315
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 316
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
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<220>
 <221> MOD_RES
 <222> (29)
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<220>
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 <222> (32)
 <223> (1-(4-hexadecylpiperazine))aspartic acid

<220>
 <223> this s quence has an amidat d c-t rminus

<400> 316
 His Xaa Glu Gly Thr Ph Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15

Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 317
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <222> (31)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (32)
 <223> (1-(4-decylpiperazine))aspartic acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 317
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 318
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
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<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <222> (32)
 <223> (1-(4-dod cypiperazine))aspartic acid

<220>

<223> this sequence has an amidated c-terminus

<400> 318

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
		20						25					30		

<210> 319

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

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<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (31)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (32)

<223> (1-(4-tetradecylpiperazine))aspartic acid

<220>

<223> this sequence has an amidated c-terminus

<400> 319

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10				15		
Gln	Ala	Arg	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg	Xaa	Xaa
		20						25					30		

<210> 320

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

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<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (31)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (32)
 <223> (1-(4-hexadecylpiperazine))aspartic acid

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 320
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

 <210> 321
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (30)
 <223> (1-dodecylamino))glutamic acid

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 321
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

 <210> 322
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (20)
 <223> (1-dod cylamino))glutamic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 322
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 323
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (28)
 <223> (1-dodecylamino))glutamic acid

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 323
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 324
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES

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<222> (31)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (32)
<223> (1-dodecylamino))glutamic acid

<220>
<223> this sequence has an amidated c-terminus

<400> 324
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
      20           25           30

<210> 325
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (2)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (20)
<223> N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)lysine

<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<223> this sequence has an amidated c-terminus

<400> 325
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1           5           10           15
Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
      20           25           30

<210> 326
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (2)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (20)
<223> N- epsilon-(2-(4-dod cyl-1-piperazine)-ac tyl)lysine

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<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 326
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 327
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 327
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 328
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N- epsilon-(2-4-hexad cyl-1-piperazine)-acetyl)lysine

<220>
 <221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 328

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 329

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

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<221> MOD_RES

<222> (28)

<223> N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)lysine

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 329

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
1				5					10					15	
Gln	Ala	Ala	Arg	Glu	Phe	Ile	Ala	Trp	Leu	Val	Xaa	Xaa	Arg		
			20					25					30		

<210> 330

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

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<221> MOD_RES

<222> (28)

<223> N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)lysine

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

 <400> 330
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

 <210> 331
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Mutagen

 <220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

 <220>
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 <222> (28)
 <223> N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

 <220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <223> this sequence has an amidated c-terminus

 <400> 331
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

 <210> 332
 <211> 30
 <212> PRT
 <213> Artificial Sequence

 <220>
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 <220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

 <220>
 <221> MOD_RES
 <222> (28)
 <223> N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)lysine

 <220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

 <220>
 <223> this sequence has an amidated c-terminus

<400> 332
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 333
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 333
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 334
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (30)
 <223> N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 334
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15

<220>
<223> Mutagen

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<220>
<221> MOD_RES
<222> (2)-
<223> alpha-aminoisobutyric acid
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<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid
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<220>
<221> MOD RES
<222> (30)
<223> N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)lysine
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<220>
<223> this sequence has an amidated c-terminus

<400> 335
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
20 25 30

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<210> 336
<211> 32
<212> PRT
<213> Artificial Sequence
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<220>
<223> Mutagen

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<220>
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<222> (2)
<223> alpha-aminoisobutyric acid

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<220>
<221> MOD_RES
<222> (29)
<223> alpha-aminoisobutyric acid

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<220>
<221> MOD RES
<222> (32)
<223> N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)lysine

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<220>
<223> this sequence has an amidated c-terminus

<400> 336
His Xaa Glu Gly Thr Ph Thr Ser Asp Val S r Ser Tyr Leu Glu Gly
1 5 10 15
Gln Ala Ala Arg Glu Phe Il Ala Trp Leu Val Arg Xaa Arg Gly Xaa
20 25 30

<210> 337
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
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 <223> alpha-aminoisobutyric acid

<220>
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 <222> (32)
 <223> N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 337
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 338
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (32)
 <223> N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 338
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 339
 <211> 32


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<212> PRT
<213> Artificial Sequence

<220>
<223> Mutagen

<220>
<221> MOD_RES
<222> (2)
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<220>
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<222> (29)
<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (32)
<223> N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 339
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
      20             25             30

<210> 340
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (2)
<223> alpha-aminoisobutyric acid

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<223> alpha-aminoisobutyric acid

<220>
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<223> alpha-aminoisobutyric acid

<220>
<221> MOD_RES
<222> (32)
<223> N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)lysine

<220>
<223> this sequence has an amidated c-terminus

<400> 340
His Xaa Glu Gly Thr Ph Thr S r Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
      20             25             30

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<210> 341
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Mutagen

<220>
 <221> MOD_RES
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<220>
 <221> MOD_RES
 <222> (32)
 <223> N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 341
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 342
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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<220>
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 <222> (32)
 <223> N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 342
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Il Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 343
 <211> 32
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <223> alpha-aminoisobutyric acid

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<220>
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 <222> (32)
 <223> N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 343
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 344
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
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 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (20)
 <223> N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 344

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
		1			5				10					15	
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 345

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

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<221> MOD_RES

<222> (20)

<223> N-epsilon-(2-(4-dodecyl-1-piperazine)-acetyl)lysine

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 345

His	Xaa	Glu	Gly	Thr	Phe	Thr	Ser	Asp	Val	Ser	Ser	Tyr	Leu	Glu	Gly
		1			5				10					15	
Gln	Ala	Arg	Xaa	Glu	Phe	Ile	Ala	Trp	Leu	Val	Arg	Xaa	Arg		
			20					25					30		

<210> 346

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Mutagen

<220>

<221> MOD_RES

<222> (2)

<223> alpha-aminoisobutyric acid

<220>

<221> MOD_RES

<222> (20)

<223> N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<220>

<221> MOD_RES

<222> (29)

<223> alpha-aminoisobutyric acid

<220>

<223> this sequence has an amidated c-terminus

<400> 346
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 347
 <211> 30
 <212> PRT
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<220>
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 <222> (2)
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<220>
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 <223> N-epsilon-(2-(4-hexadecyl-1-piperazine)-acetyl)lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 347
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Xaa Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg
 20 25 30

<210> 348
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 <213> Artificial Sequence

<220>
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 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
 <221> MOD_RES
 <222> (28)
 <223> N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)lysine

<220>
 <221> MOD_RES
 <222> (29)
 <223> alpha-aminoisobutyric acid

<220>
 <223> this sequence has an amidated c-terminus

<400> 348
 His Xaa Glu Gly Thr Ph Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15

Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 349
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
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<220>
 <221> MOD_RES
 <222> (2)
 <223> alpha-aminoisobutyric acid

<220>
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<220>
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<220>
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<400> 349
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 350
 <211> 30
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<220>
 <223> this sequence has an amidated c-terminus

<400> 350
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 1 5 10 15
 Gln Ala Arg Arg Glu Ph Ile Ala Trp L u Val Xaa Xaa Arg
 20 25 30

<210> 351
 <211> 30
 <212> PRT
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<220>
 <223> this sequence has an amidated c-terminus

<400> 351
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
 20 25 30

<210> 352
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<220>
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 <223> N-epsilon-(2-(4-decyl-1-piperazine)-acetyl)lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 352
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp L u Val Arg Xaa Xaa
 20 25 30

<210> 353
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<212> PRT
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<220>
 <223> this sequence has an amidated c-terminus

<400> 353
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 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 354
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 <223> N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<220>
 <223> this sequence has an amidated c-terminus

<400> 354
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 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
 20 25 30

<210> 355
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<220>
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<220>
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<400> 355
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1 5 10 15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
20 25 30

<210> 356
<211> 32
<212> PRT
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<220>
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<400> 356
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1 5 10 15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
20 25 30

<210> 357
<211> 32
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<220>
<223> this sequence has an amidated c-terminus

<400> 357
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
          20             25             30

<210> 358
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<220>
<223> this sequence has an amidated c-terminus

<400> 358
His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1             5             10             15
Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
          20             25             30

<210> 359
<211> 32
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 <223> this sequence has an amidated c-terminus

<400> 359
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 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Gly Xaa
 20 25 30

<210> 360
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 1 5 10 15
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 20 25 30

<210> 361
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<220>
 <223> this sequence has an amidated c-terminus

<400> 361
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 1 5 10 15
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 20 25 30

<210> 362
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 <223> N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine

<220>
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<400> 362
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 1 5 10 15
 Gln Ala Arg Arg Glu Ph Ile Ala Trp L u Val Arg Xaa Arg Xaa Xaa
 20 25 30

<210> 363
 <211> 32
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 <223> this sequence has an amidated c-terminus

<400> 363
 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
 1 5 10 15
 Gln Ala Arg Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
 20 25 30